TELEPHONE INTERVIEW

A telephone interview was held on November 19, 2007. Claims 7 and 15 were discussed in light of *Ruozi* (U.S. Patent No. 6,039,991) and *Chitre* (U.S. Patent No. 4,687,895). Both Claims 7 and 15, and their dependent claims, are directed to a conditioning system for sterilizing products including pressure sealing doors, a pressurizing means for controlling the pressure within a pressurizeable stage, heating means for heating products within the pressurizeable stage and a conveyor for transporting products from upline to downline.

Prior to the above amendments, Claim 7 and its dependent Claims 8 – 10 included the limitations that the conditioning system includes a source of a cleaning fluid and the pressurizeable stage includes at least one inlet for receiving the cleaning fluid and an outlet for allowing a cleaning fluid to drain. The Examiner contended that the use of the word "fluid" could be interpreted broadly to encompass *Chitre* which describes providing a gaseous environment for cooking, but not cleaning, and the introduction of a gas through inlets and the discharge of the gas through a discharge port.

The undersigned explained that he had not intended to interpret fluid so broadly as to encompass a gas and that *Chitre* did not suggest a source of a cleaning liquid or inlets or outlets for introduction or discharge of a cleaning liquid. The Examiner conceded this point, and the undersigned agreed to amend Claim 7, and any other claims, to clarify that the cleaning source is a liquid.

Claim 15 includes the further limitation that the conditioning system include a temperature sensor and a controller connected to the temperature sensor and heat source for automatically moving the microwave field depending on temperature measurements. In rejecting this claim, the Examiner cited *Chitre* which describes increasing or decreasing the power to microwave sources. The Examiner further questioned whether the increase or decrease of power would automatically move the microwave field as claimed by Applicant.

In response, the undersigned explained that the increasing or decreasing of power to microwave sources would not move the microwave field as claimed by Applicant, but instead would merely increase or decrease the amplitude of the energy within the microwave field. In response to this explanation, the Examiner indicated that he would take the arguments concerning Claim 15 under advisement.

SUMMARY OF AMENDMENTS

The changes to Claim 1 are considered substantially non-substantive. More particularly, the language "conveyor" has been amended to recite "conveyor means" to be consistent with the language in the last paragraph within the claim. This change has also been made to Claims 2, 4, 7, 11, 15 and 17.

Claim 4 has been amended so as to refer to two pairs of parallel sidewalls instead of referring to parallel top and bottom walls and parallel sidewalls. This change was made to eliminate any confusion as to what would be a top or bottom versus a sidewall. In addition, Claim 4 has been amended to include the limitation that microwave sources are arranged on both sides of a pair of opposing sidewalls so as to position products traveling upline to downline through the conditioning tunnel between the microwave sources. Support for this amendment can be found in the specification on page 16, line 21 – page 17, line 7 which identifies the placement of the microwave sources (130 and 140) and with reference to Figs. 2 and 4 which illustrates microwave sources 130 and 140 on opposing sides.

Claim 5 has been amended for clarification. The change is non-substantive.

Claim 7 has been amended to reflect that the cleaning material is a liquid, and not merely a fluid. Support for this change can be found on page 7, line 21 and page 9, lines 14 - 17. The additional claims which previously referred to a *cleaning fluid* have also been amended to now refer to a *cleaning liquid*. These claims include Claims 10, 14 and 20.

ARGUMENTS IN SUPPORT OF CLAIM ALLOWANCE

All of the claims, Claims 1 – 20, are directed to a conditioning system for sterilizing products including a tunnel having an entrance, an exit and one or more stages for conditioning food. The stages include at least one pressurizeable stage which also includes a heating means in the form of a series of microwave sources. The conditioning system includes a conveyor for moving products from upline to downline through the conditioning unit.

Claims 1 – 3

Independent Claim 1, and by dependency Claims 2 and 3, also include the limitation that the conditioning system include a plurality of wheels located within the pressurizeable stage, but the motor for driving the wheels is positioned exterior to the pressurizeable stage. The wheels within the pressurizeable stage are driven by shafts which project through holes formed in the sidewalls of the pressurizeable stage. None of the prior art references disclose or suggest placing the motor exterior to the pressurizeable stage or including shafts which project through holes formed in the pressurizeable stage sidewalls.

On pages 8 and 9 of the Examiner's Office Action of August 7, 2007, the Examiner argues that this construction is obvious in view of *Ruozi* in view of *Chitre* and further in view of *Savi*. *Ruozi* discloses a conditioning unit including a pressurizeable stage. However, it provides little description as to a mechanism for moving products within the conditioning system. Meanwhile, *Chitre* describes a conveyor system including a conveyor belt driven by a drive belt exterior to the heating area. However, the conditioning tunnel is far different than a pressurizeable stage as practiced by Applicant and thus it does not appear to have any significant sidewalls. Without sidewalls, the *Chitre* drive belt can be simply routed adjacent to the heating area. Finally, *Savi* describes a conveyance system including numerous shafts including the shaft surrounded by chains 3 and 3′. However, these shafts do not project through the sidewalls of a conditioning tunnel.

None of the prior art references describe a conveyance system wherein shafts project through the sidewalls of the conditioning tunnel, let alone suggest a structure wherein shafts project through the sidewalls of a pressurizeable stage as claimed by Applicant. The prior art also does not illustrate a motor exterior to a pressurizeable stage. Because Claims 1 – 3 all include the limitation that the conveyor system include a motor exterior to the pressurizeable stage, and a plurality of shafts projecting through holes formed in the pressurizeable stage sidewalls, these claims are believed allowable.

Claims 4 – 6

Claim 4 and its dependent Claims 5 and 6 include the limitations that the conditioning system includes a pressurizeable stage that has a substantially quadrilateral cross-section. As explained in detail previously, none of the prior art references suggest a conditioning system in which the pressurizeable stage has a rectangular cross-section. Instead, prior art pressurizeable chambers typically included a circular cross-section which was adopted because mechanical stress and strain in pressure vessels is best distributed in spherical or cylindrical structures. Since the prior art does not suggest these features, Claims 4 – 6 are believed allowable.

Applicant has also amended independent Claim 4 to include the limitation that microwave sources are arranged on both sides of a pair of opposing sidewalls so as to position products traveling upline to downline through the tunnel between the microwave sources. This construction is also not suggested in the prior art and an additional basis for the patentability of Claims 4 – 6.

Claims 7 – 10

Claims 7 – 10 include the limitation that the tunnel includes an inlet for receipt of cleaning liquids, and outlet for release of cleaning liquids and a source of cleaning liquids.

During the recent telephone interview, the Examiner seemed to admit that though *Chitre* may disclose an apparatus including inlets and outlets for the introduction and release of gases, there was no suggestion that the gas be for cleaning or that *Chitre* or the cited art suggested Applicant's claimed invention that the tunnel include a source of cleaning liquid and an inlet and outlet for the receipt and release of cleaning liquids.

Claims 11 – 14

Claim 11, and by dependency Claims 12 – 14, include the limitation that the conditioning tunnel includes a controller connected to the conveyor and temperature sensor so that the controller can automatically move products upline or downline depending on temperature measurements made by the temperature sensor. For example, where a product has heated more quickly than anticipated, the controller will cause the product to be moved from the microwave field in order to optimize appropriate heating.

At the bottom of page 4 of the Examiner's Office Action of August 7, 2007, the Examiner argues that the PLC described in *Ruozi* is capable of being programmed to automatically move products upline or downline depending on temperature measurement. This argument fails for two reasons. First, the Examiner admits that there is no suggestion in *Ruozi* that the temperature sensor is connected to the controller. Secondly, the fact that a PLC is capable of being programmed to perform a function is not an appropriate rejection wherein there is no suggestion within the prior art that the PLC contains such programming. Accordingly, Claims 11 – 14 are believed allowable.

Claims 15 – 20

Claim 15, and by dependency Claims 16 – 20, includes the limitations that the conditioning system include a temperature sensor for measuring the temperature of products, as well as a controller connected to the heating system and temperature sensor for controlling the microwave sources to automatically move the microwave field depending on temperature measurements. Applicant submits that the prior art does not suggest any sort of construction wherein a controller automatically moves the microwave field depending on temperature measurements of the products.

In rejecting these claims, the Examiner cites *Chitre* which admittedly could be broadly read to describe a controller connected to microwave sources and a temperature sensor for automatically altering the power to microwave sources based on temperature measurements. However, altering power to microwave sources is far different than the movement of the magnetic fields. Particularly, the increase or decrease in power to the microwave sources may change the amplitude of the field, but not move the field. In contrast, Applicant has claimed movement of the magnetic field based on temperature measurements. As described on page 18, paragraph 1 of Applicant's specification, the movement of the magnetic field is caused by either movement of the microwave sources themselves such as by constructing the microwave sources upon gimbals or tracks and physically moving the microwave sources and their corresponding magnetic field. Alternatively, movement of the magnetic field may be done by passively moving the electromagnetic field which, as would be understood by those skilled in the art, can be done by altering the phase of adjacent microwave sources or by other methods known to those skilled in the art. However, such movement is not the same as merely changing the amplitude of the field as would be accomplished by altering the power to the microwave sources.

Because the prior art does not suggest a controller connected to a temperature sensor or microwave sources for automatically moving the microwave field depending on temperature measurements, Claims 15 – 20 are believed allowable.

CONCLUSION

The Examiner's attention to the present application is greatly appreciated.

As a result of the above amendments, the arguments presented at the telephone interview, and the explanation set forth herein, the claims in this case are believed to be in condition for allowance. If there are any remaining issues that need to be resolved, it is requested that a telephone call be placed to the undersigned.

Respectfully submitted,

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